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ABSTRACT

The fatal flaw of competency/performance-based teacher education (C/PBTE) is the lack of empirical knowledge on teacher behavior as it relates to pupil outcomes. Competencies identified have been based on reason, logic, and experience--all insufficient without empirical evidence. It seems that many accusations against C/PBTE are justified, and it is certainly true that C/PBTE has not yet demonstrated its superiority over other bases for teacher certification. Teaching is more than mastery of techniques. A large part of teaching is art, which does not easily lend itself to behavioral description. The major problem with the argument against C/PBTE is that there is no more factual basis for other teacher education programs than there is for C/PBTE programs. All teacher education programs are based on armchair speculation, reason, logic, and experience. At present, C/PBTE proponents should make no claims for product criteria except in the sense that the product is teacher behavior. Teachers must be included in the essential steps of planning and evaluating C/PBTE programs. Also, research must be designed to funded to continue the validation process. (PB)

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# COMPETENCY/PERFORMANCE-BASED CERTIFICATION

## The Latest Scientific Management Effluvium?

## Or

## The Answer For Which We Have Waited?

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To

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I have been asked to take the "con" position with regard to "Competency/Performance-Based Personnel Certification Standards and In-Service Education." I don't know exactly why a teachers' association representative was chosen to take this position. I know that the NEA has taken a dim view of C/PBTE,[1] but state teachers' associations are not yet obligated to agree with the NEA. The California Teachers Association has taken no position as of this date. The matter is under study in the Teacher Education Committee of our state-wide policy body, the State Council of Education. I don't know what position the Council will take.

The California Teachers Association's history in this arena would indicate that teachers in California would not automatically be opposed to the idea — but that leaves much unsaid. The Association adopted one of the earlier versions of competency definitions as its official definition of teacher competency. After some modifications, CTA adopted the "California Definition" which was developed by Professor Lucien Kinney and a group at Stanford University. The definition is dated, and I don't know whether our Council would reaffirm it now.

I am confident that, if punitive applications of C/PBTE are attempted, the Association will be in opposition. I consider re-certification punitive.

One is tempted to say, with regard to Competency/Performance-Based Teacher Education, "So what is new?" People have been talking about morality and virtue for centuries, but morality and virtue are still not universal — even if they could be defined in a way that would meet with universal approval.

In order to be clear about what I mean when I refer to C/PBTE, I'll draw upon a definition that I find useful. Although it is easier to cite the need for the millennium of perfect C/PBTE than to define it, I think Phyllis Hamilton has worked out a definition that I can live with.

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[1]"Resolved, that the National Education Association demand that all state education departments postpone the implementation of Performance-Based Teacher Education programs until valid and reliable research indicates that these programs are an improvement over present programs." (Item 20 of New Business adopted by the 1974 NEA Representative Assembly.)

Dr. Phyllis Hamilton, of the Stanford Research Institute, defines it this way:

> The competency-based approach can be defined as one which specifies objectives in explicit form and holds prospective teachers accountable for meeting them. Teacher competencies and measures for evaluating them are specified and made known in advance of instruction.
>
> Competency-based programs are criteria referenced and thus provide information as to the degree of competence attained by a particular student teacher, independent of reference to the performance of others. Competencies may be developed and assessed on three types of criteria:
>
> - Knowledge--facts, principles, generalizations, awarenesses, and sensitivities that the student teacher is expected to acquire.
> - Performance--behaviors that the student teacher is expected to demonstrate.
> - Consequences--outcomes that the student teacher is expected to bring about in the emotional and intellectual growth of his pupils.
>
> Beyond this basic definition, there is confusion even among the disciples of the movement as to what constitutes a CBTE program. Most would agree, though, that a program is competency-based if it possesses the following characteristics:
>
> - Individualized instruction--the student teacher is involved in making instructional choices that he considers relevant to his own interests.
> - Instructional modules--a module is a unit of learning consisting of a set of activities intended to help a student teacher achieve specified objectives.
> - Time as a variable--completion of modules and rate of progress through the program are determined by the student teacher's competency rather than by the traditional requirement of course completion in a fixed time span.
> - Field-centered instruction--because of the emphasis on performance in real settings with pupils, there is more and earlier practice teaching.

. Emphasis on exit rather than entrance--while program admission requirements are less rigid, demonstration of competence is required for certification.[2]

The scientific management notion brought Bobbitt in 1912 to the forefront with his "General Principles of Management Applied to the Problems of City School Districts." This was followed by Charters and Waples in 1928, by Lucien Kinney's work in 1953, and by the Florida Catalog in 1972 and many others all along the line.[3]

The bandwagon of scientific management has had a new face put on it and a new label tied to it. Its fuel is ballyhoo, its results limited because the fatal flaw remains. It is a scientific management movement without a science — only the trappings of science. It rests only on logical extensions of conjecture and armchair speculation.

The notion is like apple pie and motherhood. Of course, everyone would applaud having more specific outcomes defined for credential programs and to guide inservice education. Everyone would be appreciative if those practices which have the most significant positive consequences for students were identified. Most teachers want to improve their effectiveness.

Teachers will, I suspect, be more than a little reluctant to be shotgunned down another path which has been chosen by somebody else -- another path hailed as the rosy road to salvation. They are more than a little skeptical -- having been blamed for past failure of proclaimed panaceas dreamed up by true believers (or the Feds) who often seem remarkably tardy about adopting the advocated practices in their own shops -- including re-certification. If the Ph.D. factories realized the potential revenue in re-certifying Ph.D.'s as the credential factories have realized the potential in re-certification, maybe the Ph.D.'s would be less quick to get on the bandwagon of re-certifying public school teachers.

It is easy to take the con position on this issue. The literature is full of dissenting voices.

I call your attention especially to the report of one USOE-sponsored study, done by the Stanford Research Institute, which takes a skeptical tone and raises critical issues. The report was printed in mid-1973. I have attended several USOE-sponsored conferences on C/PBTE since that date, and the document was missing. I didn't even hear it referred to by USOE people. This has raised serious questions in my mind about this bandwagon being fueled by tax money.

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[2]Phyllis D. Hamilton, Competency-Based Teacher Education, Memorandum Report, EPRC 2158-19, Educational Policy Research Center, Stanford Research Institute, Menlo Park, California 90425. 1973

[3]For an interesting tracing of this bit of history from which this is reported, see ibid.

I have attended six conferences on C/PBTE, five of them national conferences. It was fascinating to sit in one room one hour and hear the researchers -- the best in the nation -- tell us that there is no substantial evidence to connect teacher behavior and student achievement and then sit in another room the next hour and listen to the promoters tell about how they were building programs based on connections between teacher behavior and student achievement.

It was almost as if they were saying, "Don't confuse us with the facts, or the lack of them; we've got a good thing going here, and we are going to bandwagon it for all it is worth."

From where do the competencies come that make up these lists and catalogs? They come largely from armchair speculation and extrapolation of speculation, from reason, logic, and retrospective analysis of experience. The most serious defect, the fatal flaw, is the "lack of empirical knowledge on teacher behavior as it relates to pupil outcomes."[4] Phyllis Hamilton, Barak Rosenshine, and Nathan Gage -- and many others -- assert this also. They use different words and different degrees of emphasis but transmit the same essential message. They point to the same fatal flaw.

So, these accusations seem to be justified:

Competency/Performance-Based Teacher Education --

(1) is speculative

(2) is conjectural

(3) rests largely on unsubstantiated premises, upon hunches, and best guesses

(4) grows out of retrospective analysis of experience

(5) is grossly over-blown

(6) has not yet demonstrated its superiority over other bases for teacher certification

(7) is old wine in new bottles

(8) must be accepted on faith

There are difficulties at both ends and all along the way of the assumed continuum, teacher behavior--student achievement. Adequately defining and describing teacher behavior presents very difficult problems -- as yet unsurmounted. Demonstrating connections between teacher behavior and student achievement remains to be done, certainly with sufficient surety to say certify -- re-certify, not certify, nor re-certify, on this basis.

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[4] Ibid.

There are literally hundreds of instruments used to codify teacher behavior. You are all familiar, no doubt, with the massive compilation of them entitled Mirrors for Behavior. Undoubtedly their number has increased exponentially since those volumes were published. No doubt, what Rosenshine and Martin said about the gaggle of such instruments submitted for the AERA 1974 meeting could be applied to most of them; that is, "On the basis of past performance, one can predict that these instruments will be seldom used by anyone except their authors and that the authors will not attempt to validate their instruments against student educational outcomes."[5]

Bob Burton Brown and Robert Soar asserted that "It is not possible to develop an instrument which looks at all important dimensions of a classroom at one time or in a single score."[6] Adoption of any one system, then, would very likely not even look at important dimensions of classrooms. The alternative is frightening: a gaggle of instruments being applied by outside "observers" -- shades of Grand Central Station.

So, defining and describing teacher behavior in the classroom remains adequately to be done.

What about connections between teacher behavior and student achievement?

A. S. Barr, writing for the 1952 Encyclopedia of Educational Research said, "It seems sound to attempt the evaluation of teaching efficiency on the basis of pupil growth, but a practical procedure has not yet been developed."[7]

McFadden, writing in 1970 said, "Little is known about the relative importance of different aspects of teaching to student learning."[8]

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[5]Barak Rosenshine and Marilyn Martin, "Teacher Education and Teaching Behavior: Comments on the State-of-the-Research," Educational Researcher, July/August, 1974, American Educational Research Association, Washington, D.C. pp. 11-12

[6]Bob Burton Brown and Robert S. Soar, Available Tools and Techniques for Evaluation Innovations, Institute for Development of Human Resources, College of Education, University of Florida, Gainesville, Florida, p. 5

[7]A. S. Barr, "Teaching Competencies, Encyclopedia of Educational Research, 1952, p. 1146

[8]Dennis N. McFadden, Increasing the Effectiveness of Educational Management -- Project D: Appraising Teacher Performance. The School Management Institute and Battelle Memorial Institute, Ohio, 1970, p. 2

Alexander Mood, writing in 1971 said, "At the present moment we cannot make any sort of meaningful quantitative estimate of the effect of teachers on student achievement."[9]

Gene Glass, speaking at the 1972 Stanford Conference on the Stull Act said, "I would propose that no characteristic of teaching be incorporated into the rating scales until research has established both that it can be reliably observed and that it bears some significant relationship to desired pupil cognitive and affective states."[10]

Rosenshine and Martin, writing in 1974, restate a theme Rosenshine has often asserted, "Systematic studies on teacher training have been conducted for more than ten years and yet a fundamental problem is still unresolved and relatively unstudied. That is, although we know that we are generally able to train teachers in a variety of skills, the utility of these skills must be accepted on faith."[11]

Defining and measuring student achievement, except in a very few cognitive areas, is not satisfactory either. Even the achievement test makers, themselves, take the soft approach and ask that their tests not be used as final criteria.

Charles W. Sanford, writing for the 1952 Encyclopedia of Educational Research, said, "Pupil achievement would seem to be a justifiable criterion of teaching success. However, its use is accompanied by numerous difficulties, not the least of which is in answer to the question, 'What achievement?' Answers are varied and include such items as information and knowledge, attitudes, appreciations, and skills. Further difficulties are created by the lack of agreement upon what information, what knowledge, and so on; the absence of valid and reliable instruments for measuring specified achievements, the possibility that pupil achievement as ordinarily measured is nearly valueless because it may be merely a measure of the efficiency with which the pupil retained factual information long enough to pass the test; the lack of compatibility between some of the measuring instruments and the recognized objectives of education; and the rather well-supported

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[9]Alexander M. Mood, "Do Teachers Make A Difference?" Do Teachers Make A Difference? A Report on Recent Research on Pupil Achievement, U. S. Office of Education, 1971

[10]Gene V. Glass, "Statistical and Measurement Problems in Implementing the Stull Act," Mandated Evaluation of Educators: A Conference on California's Stull Act, October, 1972, p. 87

[11]Rosenshine and Martin, Op. Cit., p. 11

suspicion that the pupil's gain in at least information and knowledge is due more to his inherent ability and his habits of study than to the instruction offered by a teacher."[12]

I have not seen data that makes this more than 20-year-old position invalid. When were achievement tests <u>really</u> updated -- not just face-lifted? Maybe since 1951, but do the new versions obviate these claims?

Terrel H. Bell, writing in 1971, said, "We need to come to the task of finding out what works and what does not work after we have better mastery of measuring student performance as a product."[13]

Finally, H. Thomas James, in 1971, said, "The results of the teaching act are measured over long periods of time in which many teachers are involved with a given child, and the assignment of cause for an individual failure among such diffuse contributions is virtually impossible under existing arrangements for schooling."[14]

There is much talk about criterion-referenced measures, domain-referenced measures, and so on, but these largely are out in the future. Even if perfected, the problem of establishing cause and effect remains.

What we need in order to have a firm platform under anything as ambitious, expensive, and full of threat as C/PBTE is evidence that products of these programs produce more, and more important, student learning than products of non-C/PBTE programs. If it is too early to call for such evidence, where are the plans being laid and the funding being provided to establish or refute the claims of C/PBTE proponents?

In summary of this section of my remarks, I make these comments:

(1) The basis in fact for C/PBTE is shallow and not yet substantive enough to wholly depend upon since critical planks in the platform supporting C/PBTE are yet to be hewn.

(2) C/PBTE suffers from the bandwagon, panacea approach and opens itself to the backlash of discredit because of the extravagent claims made for it.

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[12]Charles W. Sanford and Lloyd J. Trump, "Pre-Service Selection," <u>Encyclopedia of Educational Research</u>, 1952, p. 1391

[13]Terrel H. Bell, "The Means and Ends of Accountability," <u>Proceedings of the Conference on Educational Accountability</u>, Hollywood, California, March, 1971. Educational Testing Service, Princeton, New Jersey, 1971. p. C-6

[14]H. Thomas James, "Public Expectations," <u>Proceedings of the Conference on Educational Accountability</u>, Hollywood, California, March, 1971, Educational Testing Service, Princeton, New Jersey, p. H-5

(3) Unless the idea is unhitched from the accountability movement which places classroom teachers alone in the bull's-eye, it will be bludgeoned to death in some places and nibbled to death in others.

It won't be easy to force two million highly educated, articulate, and increasingly well-organized professionals to do anything which has such a shallow basis in fact and which doesn't make sense to them. If these two million people are teachers and if they feel the proposals will not really serve the best interests of students, it would be even more difficult to shotgun them into submission. I think the evidence regarding the fate of other highly touted curriculum reform movements bears testimony to this fact.

Lucien Kinney was my major doctoral adviser at Stanford, and I worked with development of the CTA version of the California Definition of Teacher Competence right after leaving Stanford. Lucien used to say that teacher education programs reflected nothing as much as they reflected the power structure of the institution. This may be cynical, but he has as much experience as almost anybody in teacher education program development.

The California Definition was the result of application of reason, logic, and experience. It was an armchair definition of teacher competence. Until I can be convinced that the currently popular definitions of teacher competence labeled C/PBTE are based in something other than reason, logic, and experience, I'll have to regard them as potentially no panacea -- anymore so than the California Definition was a panacea.

Reason, logic, and experience! What comfortable companions these have been for man through the years!

When science could not or did not provide evidence, man speculated, reasoned, and examined his experience. Of course, these are the sources of hypotheses and can be preludes to solid evidence. But, I'm not sure I can commit myself intellectually to the notion that there may be an omnipresent, omnipotent science which will, at some magic time, provide evidence upon which to base all human endeavors.

I must remind myself, as I flirt with reason, logic, and experience as bases for action, that these fickle muses led "medical" men to use leeches and bleeding, "religious" men to debate the number of angels that could dance on a pin, "scientific" men to declare that the earth is flat, that the earth is the center of the universe. (You could add to this list, I'm sure.)

Unless the claims for C/PBTE are justified in terms of the ultimate criterion, C/PBTE is just an effort to supplant one set of fantasies with another.

It is amply demonstrated that human beings can be trained to do a wide variety of things. They can be trained to be efficient killers, assemble computers, walk on the moon, preach a sermon, break into Watergate, erase tapes, transplant hearts, manufacture artificial kidneys, etc., etc. So -- teachers can be trained to ask questions higher up Bloom's scale,

to accept student ideas, to be task oriented, to structure, to employ variety and to be flexible, even to be enthusiastic or to appear so, etc., etc.

But these "skills" or "behaviors" may fall far short of the mark.

Those in the audience who have studied piano or any other musical instrument, realize, I'm sure, that Czerny mastered the technique of playing scales, arpeggios, trills, two- and four-part inventions and many other marvelous feats of dexterity and control. This did not make him a Beethoven, a Brahms, or a Bach. To be sure, these artists also mastered the techniques, helped by master teachers like Czerny.

Van Gogh mastered brush techniques while he studied in Paris -- and then went on to invent his own brush techniques for others to learn. But his art is far more than brush technique, as I'm sure anyone who has spent a day in that wonderful Van Gogh museum in Amsterdam would testify.

Let us not be deluded that we know enough about technique, or how to recognize, describe, and measure it, or how to transmit it to a would-be practitioner, or that technique may even be the real essence of teaching. Let us not become over-committed to the C/PBTE approach.

Professor Gene Glass, as well as others, have asserted that Rosenshine's study of the studies indicates that the usefulness of some behaviors has been established with enough confidence to incorporate them into practices in teacher education.[15] These should be defined so that what they mean is known and agreed upon; procedures for their acquisition and perfection should be developed.

Procedures for verifying that a would-be practitioner is indeed in command of this little arsenal of technique need to be developed and made reliable. Once we know that numbers of practitioners are in command of this little arsenal, we then should seek evidence about the effectiveness of the techniques across a wide range of kinds of students, practitioners, and schools. When this is done, we then will just have begun to have bases for abandoning a tiny bit of our dependence upon reason, logic, and experience.

A major concern that I have about C/PBTE is that, like traditional teacher education, its effectiveness is measured at the point of leaving college and in terms of practitioner behavior. In spite of the grand claims being made for C/PBTE, I have not discovered specific efforts to establish its effectiveness in terms of the ultimate criterion. Until that is under way, proof that it is more effective is absent.

The notion that command of a little arsenal of techniques is sufficient should be laid to rest -- given the "deep six" wherever it rears its ugly head. Command of trills and arpeggios does not a Beethoven make.

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[15]Gene V. Glass, Op. Cit., p. 88

I am confident, and there are many others who share this confidence, that the little arsenal of techniques covers only a small fraction of the whole, that there remains a large area of pure art, which doesn't lend itself to description in behavioral terms.

The truth of an observation made by Tom James (cited above) is upon us.

David Ryans earlier stated a theme which is worth setting in this context. He said, "Actually, the seeming relevance and appropriateness of the measurement of student behaviors and their products as indicators of teacher performance may be more apparent than real, for the producers of (or contributors to) student behavior or achievement are numerous, and it is most difficult to designate and partial out the contribution to a particular product made by specified aspect of the producing situation, such as the teacher."[16]

He then makes a point which I feel is extremely important in this day when Stull Acts are passed with the declared intention of "getting" teachers, when the accountability movement which spawned C/PBTE and PPBS is focused on individual teachers, and school board association representatives state that they are interested in termination and de-certification, and not especially interested in improving the financial support base for teacher education programs. Dr. Ryans said, "The usefulness of research findings pertaining to the predictions of teacher effectiveness will be greatest when the results are considered in an actuarial context, rather than in attempting highly accurate prediction for given individuals."[17]

Incorporating the less than a dozen behaviors identified by Rosenshine into teacher education programs could be productive of student learning, but let's not rush to cement them into certification statutes and certainly make more modest claims about their efficacy until more evidence is in. Any attempt to cement these into re-certification standards will be met, I'm confident, with a solid wall of opposition.

Opposition would be justified because such re-certification standards would ignore important elements contributing to the success or non-success of practitioners. Dr. Bell made this point when he said, "When the student fails to learn, the entire system must be introspective."[18]

Harold McNally made the point that arouses opposition from classroom teachers to the re-certification notion. He said, "Let us not fall into the old, old trap that it must be the teachers, alone, who shall be accountable,

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[16]David G. Ryans, "Teacher Effectiveness," Encyclopedia of Educational Research, Third Edition, 1960. pp. 1487-1490

[17]Ibid.

[18]Terrell H. Bell, Op. Cit., p. C-1

that they shall be the scapegoats from the shortcoming of the system, whatever those may be."[19] Attempts to bend teachers into this mold comes at a time when teachers, more effectively organized than ever before, have begun to exert their influence to avoid again being blamed for the failure of another panacea, another "magic bullet," another scheme hatched out of the scientific management syndrome which has cost the nation billions of dollars in cost overruns in the defense industry and is now being given the band wagon treatment in education.

A major problem that I see with the "con" argument on C/PBTE is that there is no basis in fact for teacher education programs which do not claim to be C/PBTE. They are based on armchair spectulation, reason, logic, and experience too! But we must go on, doing the best we can. We cannot wait for the millennium of research to produce neat, validated, reliable, parsimonious "evidence" for us.

Let us admit, then, for the moment at least, that C/PBTE proponents are only talking about presage and process criteria and make no real claims for product criteria except in the sense that the product is teacher behavior. This falls far short of the ultimate criterion suggested by the American Educational Research Association; namely, "pupils' achievement and success in life" and drops perhaps as low as tenth rank in that hierarchy of criteria according to ultimacy.[20] But, if that is the best we can do at the moment, we must do it the best we can.

I am able to settle for that, accompanied as it should be, by modest claims, no straight-jacketing, and generously supported research efforts to validate the practices, but only under certain conditions.

Proponents of C/PBTE must realize that to leave teachers out of the essential steps of planning and evaluating is to doom the effort to failure. Teachers are not obstructionists when they are partners with full voting rights. For example, I suspect that Rosenshine's list of behaviors would elicit positive responses from teachers. Any extension of the list which results from application of reason, logic, and experience will be more likely to gain acceptance if teachers are equal partners in calling up reason, logic, and experience. As McFadden said, "It has been found that if standards of performance and technique appraisal are perceived as not having credibility by those being appraised, and if the appraisal of the person's capabilities is made without inputs from him, such a system or program usually decreases staff morale and increases anxiety about job security."[21]

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[19]Harold J. McNally, "Teacher Evaluation That Makes A Difference," Educational Leadership, January, 1972, p. 357

[20]N. L. Gage, "Paradigms for Research on Teaching," Handbook of Research on Teaching, Rand McNally & Company, Chicago, 1963, p. 117

[21]Dennis N. McFadden, Op. Cit., p. 3

The growth of collective bargaining laws and practices for teachers indicates that teachers are going to have decision-making authority. They must be made full partners in this enterprise.

To put it in so many words: since the teaching profession is forced to rely heavily upon reason, logic, and experience in defining teacher competencies, it is obvious that the licensed practitioners should be relied upon to apply their equally productive reason, logic, and experience to the problem. To close them out is to treat two million practitioners as means. As Glass put it, "The philosophy that regards 'changes in pupil behavior' as 'the real thing' about education treats two million adults as means, and tends to disregard them as ends in themselves. I would dwell on the need to protect the teachers, but they seem quite able to protect themselves these days."22

I would add a postscript to Dr. Glass's comment: Teachers are growing more able by the day to protect themselves. I'd add also that they are growing more able to protect the arena of their practice from onslaughts by the "I do unto others but not unto myself" types peddling the latest version of the scientific management panacea.

So we are forced by the inadequacies of our science to rely heavily upon reason, logic, and experience! We must broaden the base of application of these ancient muses. Include classroom teachers as full partners (we call that parity) in calling up reason, logic, and experience. I'm confident the results will be better. Concurrent with this, and again with teachers as full partners, we must design the research and get it funded to continue the validation process. Maybe, someday, come the millennium, we can free a greater part of our practice from fantasy.

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22Gene V. Glass, Op. Cit., p. 90